

1. A method for detecting CBZ in a sample, the method comprising the steps of:

- 5 (A) providing a test sample;
(B) adding to the test sample an agent comprising avidin; and
(C) measuring the amount of CBZ specifically bound to avidin.

2. The method of claim 1, wherein the test sample comprises serum.

10 3. The method of claim 1, wherein the avidin is labeled with a detectable label.

4. The method of claim 1, wherein the avidin is selected from the group consisting of: avidin from an egg, streptavidin, and avidin derivatives.

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5. The method of claim 1, wherein the method further comprises the steps of:

- (D) providing at least one immobilized agent that binds avidin; and
(E) contacting the test sample and the agent comprising avidin to the at least one immobilized agent that binds avidin under conditions that allow binding of
20 avidin to CBZ and binding of avidin to the at least one immobilized agent, wherein steps (D) and (E) are performed prior to the step (C) of measuring the amount of CBZ specifically bound to avidin.

25 6. The method of claim 5, wherein the step (C) of measuring the amount of CBZ specifically bound to avidin comprises measuring the amount of avidin bound to the at least one immobilized agent.

7. The method of claim 6, wherein the at least one immobilized agent is biotin.

5 8. The method of claim 7, wherein the biotin is conjugated to bovine serum albumin.

9. The method of claim 8, wherein the combination of biotin and bovine serum albumin is contacted with a plastic dish.

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10. The method of claim 6, wherein the test sample comprises serum.

11. The method of claim 6, wherein the avidin is labeled with a detectable label.

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12. The method of claim 11, wherein the detectable label is selected from the group consisting of: a radioisotope, a fluorescent compound, a bioluminescent compound, a chemiluminescent compound, colloidal gold, a magnetic particle, and an enzyme.

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13. The method of claim 12, wherein the detectable label comprises horseradish peroxidase.

14. The method of claim 5, wherein the step (E) of contacting the test sample and the agent comprising avidin to the at least one immobilized agent that binds avidin under conditions that allow binding of avidin to CBZ and binding of avidin to the at least one immobilized agent comprises mixing the test sample and the avidin before contacting
5 the test sample and the avidin to the at least one immobilized agent that binds avidin.

15. The method of claim 11, wherein measuring the amount of avidin bound to the at least one immobilized agent comprises contacting the avidin bound to the at least one immobilized agent with a substrate molecule that interacts with the detectable label
10 yielding a detectable signal.

16. The method of claim 15, wherein the detectable signal is selected from the group consisting of: light, color and radioactivity.

15 17. The method of claim 16, wherein the detectable signal is quantified using a spectrophotometer.

18. The method of claim 15, wherein the level of signal is proportional to the level of CBZ in the test sample.

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19. The method of claim 1, wherein steps (A), (B), and (C) are performed in a competitive binding assay.

20. The method of claim 19, wherein the competitive binding assay is selected from the group consisting of: radioimmunoassay, radioligand binding assay, fluorescence polarization binding assay, ELISA, microplate reader-based assay, fluorimetric displacement assay, FRET assay, affinity chromatography-based assay, non-
5 chromatographic affinity assay, protein microarray assay, and fluorimmunoassay.

21. The method of claim 1, wherein steps (A), (B), and (C) are performed in a non-competitive binding assay.

10 22. The method of claim 21, wherein the non-competitive binding assay is selected from the group consisting of: agglutination assay, enzyme immunoassay, immunometric assay, radio immunoassay, ELISA, fluorescent immunoassay, chemiluminescent assay, calorimetric assay, plasmon resonance assay, FRET assay, lateral flow assay, and flow cytometry assay.

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23. A kit for detecting CBZ in a sample comprising:

- (A) a plurality of immobilized agents that bind avidin;
- (B) a plurality of label-conjugated avidins;
- (C) a wash solution;
- 20 (D) a reagent for detection of the complexes formed between the label-conjugated avidins and the plurality of immobilized agents that bind avidin; and
- (E) instructions for use.

24. The kit of claim 23, wherein the plurality of immobilized agents that bind avidin are conjugated to a solid support.

25. The kit of claim 24, wherein the solid support comprises a plastic dish.

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